

**U. S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION**

1. PROJECT TITLE/PARTICIPANT Environmental Management/Bechtel Jacobs Company LLC		2. DATE 10/01/02	3. IDENTIFICATION NUMBER DE-AC05-98OR22700
4. WBS ELEMENT CODE 1.12.04.01.01.19		5. WBS ELEMENT TITLE PAD Surface Water OU (Phase I)	
6. INDEX LINE NO. N/A	7. REVISION NO. AND AUTHORIZATION Rev. 2		8. DATE 09/05/03
9. APPROVED CHANGES N/A			
10. SYSTEM DESIGN DESCRIPTION N/A		11. BUDGET AND REPORTING NUMBER N/A	
12. ELEMENT TASK DESCRIPTION WBS GRAPHIC <p style="margin-left: 40px;">See attached.</p> INTRODUCTION <p>The objective of this subproject is to perform Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) non-critical removal action on the Surface Water Operable Unit (SWOU).</p> <p>The removal action is divided into three separate and distinct tasks:</p> <p>Construction of <u>Sedimentation Basins</u> at KPDES Outfalls 008 and 011 Removal of unacceptable soils and sediments in <u>NSDD, Sections 3,4 and 5</u> Removal of unacceptable media from <u>Outfall Ditches (including the storm sewer lines)</u>.</p> <p>To determine the extent of the Removal Action a Site investigation and Risk Assessment will be performed.</p> <p>Prior to implementation of the removal action, FFA documents will be prepared and approved, specifically, a Removal Notification, Engineering Evaluation and Cost Analysis (EE/CA), Action Memorandum, and Removal Action Work Plan., Additionally the FFA-required public participation will occur as part of the EECA development.</p> <p>With the exception of the Removal Action Work Plan, each document will address all three tasks. The logistical complexities of implementing these removal tasks will require three separate and distinct field implementations; thus there will be three separate Removal Action Work Plans. Each of the three field task activities will be documented; post construction reports will be prepared for the first two field tasks, and a Removal Action Report will be prepared at the conclusion of the third and final field task. The Removal Action Report will address all three removal tasks, thus the entire Removal Action. The Removal Action Report will be incorporated into the SMP as required by the FFA.</p> LOGIC RELATIONSHIPS <p>The Remedial Actions for the SWOU will occur after the early actions and removal actions are completed. Earlier actions on Sections 1 and 2 of the NSDD will prevent recontamination of sections 3, 4 and 5 addressed in this WBS. Removal action on the downstream section of the outfall ditches and Bayou and Little Bayou creeks (WBS 04.01.01.20) is scheduled to occur after the activities contained in this WBS are complete so that downstream recontamination will not occur.</p> SCOPE DESCRIPTION <p>Release Sites and Facilities Assessments to be completed</p>			

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<u>Location</u>	<u>Raims</u>	<u>SWMU</u>	<u>Description</u>	<u>Task</u>
N/A	No.	No.		
N/A	2041	67	C-375-E4 Effluent Ditch (KPDES 011)	Sedimentation Basins
N/A		63	C-375-W7 Oil Skimmer Ditch (KPDES 008)	Sedimentation Basins
N/A	2037	59	N/S Diversion Ditch – Sections 3, 4 & 5	NSDD
WAG 29	2053	102	Plant Storm Sewer (previously 96a, 96b, and 96c)	Outfall Ditches
N/A	2479	N/A	Internal Ditches (001, 002, 008, 010, 011, 015, 016)	Outfall Ditches

Actions to be completed

<u>Location</u>	<u>Raims</u>	<u>SWMU</u>	<u>Description</u>
<u>No.</u>	<u>No.</u>		
WAG 29	2053	102	Plant Storm Sewer (previously 96a, 96b, and 96c)
N/A	2479	N/A	Internal Ditches (001,008, 010, 015, 016)
N/A	2041	67	C-375-E4 Effluent Ditch (KPDES 011)
N/A		63	C-375-W7 Oil Skimmer Ditch (KPDES 008)
N/A	2037	59	N/S Diversion Ditch – Sections 3, 4 & 5

Past Accomplishments

- ? Preliminary assessments of Ditches 008 and 011.
- ? Preliminary assessments of NSDD Sections 3, 4 & 5.
- ? Preliminary assessments of Outfall Ditches.

Future Accomplishments

- ? Perform technical M&I activities.
- ? Prepare D0 and D1 Sampling and Analysis Plan.
- ? Prepare D0, D1, and D2 Site Investigation/Risk Assessment Work Plan.
- ? Conduct Site Investigation
- ? Conduct Risk Assessment
- ? Prepare D0, D1, and D2 Site Investigation/Risk Assessment Report
- ? Prepare D0 and D1 Removal Notification.
- ? Prepare D0, D1, and D2 EE/CA.
- ? Facilitate Public Comment period/participation process.
- ? Prepare D0, D1, and D2 Action Memorandum.

Sedimentation Controls

- ? Prepare D0, D1, and D2 Removal Action Work Plan.
- ? Install Sediment Controls.
- ? Prepare D0 Postconstruction Report for Sedimentation Controls.

NSDD

- ? Prepare D0, D1, and D2 Removal Action Work Plan for NSDD.
- ? Remove unacceptable soils and sediment from NSDD.
- ? Prepare D0 Postconstruction Report for NSDD.

Outfall Ditches

- ? Prepare D0, D1, and D2 Removal Action Work Plan for Outfall Ditches.
- ? Remove and replace storm sewers.
- ? Remove unacceptable soil/material from Outfall Ditches.
- ? Prepare D0 Postconstruction/Removal Action Report for Sediment Controls, NSDD and Outfall Ditches.

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Scope (FY 2003 Scope through complete)

04.01.01.19.1 Technical Management and Integration

Technical Management and Integration activities include the technical, subcontract, and project management necessary to ensure that all activities in the WBS elements are completed on schedule, within budget, and without safety or environmental incident. Technical Management and Integration includes the Project Manager, Deputy Project Manager, Lead Engineer, Subcontract Technical Representative, Safety Advocate, Project Controls and other BJC personnel who will perform programmatic activities, project scheduling and estimating. Other Bechtel Jacobs Company/M & I support will be carried under individual WBS elements.

The Fiscal Year Baseline/Life Cycle Baseline activities will be performed on an annual basis to determine the scope of work for future work. The future scope of work will be scheduled and estimated based upon regulatory milestones and DOE commitments.

Baseline Change Proposals – Prepare BCP documentation to make necessary corrections to the FY 03 baseline when scope, schedule, or cost changes are determined necessary.

Specific activities include:

- Ensure completion of all activities within the subproject is in compliance with the principals of Integrated Safety Management
- Maintain contact and open communications with the appropriate DOE Project Manager on the subproject activities
- Participate in biweekly technical information and monthly Project Status Review meetings to provide the DOE with project status summaries
- Manage the subcontracts and work authorizations issued to complete the work under the subproject
- Respond and supply information to DOE for Lessons Learned, surveillance and audits, Site-Specific Advisory Board support, and other DOE reporting mechanisms.
- Maintain the monthly subproject estimates and estimates at completion.

04.01.01.19.02 Site Investigation/Risk Assessment (SI/RA)

Prepare D0, D1, and D2 Sampling and Analysis Plan (SAP).

A draft D0 SAP for the determining the nature and extent of contamination in the footprint of Sediment Controls; in the NSDD; the Outfall Ditches. Comments from DOE will be incorporated and a final draft D1 RI/FS Work Plan will be submitted to the regulators for review and comment. A final D2 RI/FS Work Plan will be developed and submitted to the regulators for approval.

Conduct Site Investigation

Fieldwork to determine the nature and extend of contamination will be performed in accordance with the approved Site Investigation/Risk Assessment (SI/RA) Work Plan, following approval of site-specific work plans and a readiness review of the subcontractor.

Prepare Site Investigation/Risk Assessment Report (SI/RA)

A draft D0 SI/RA Report will be developed and submitted for internal review, then issued to DOE for review and approval. Comments from DOE will be incorporated and a final draft D1 SI/RA Report will be submitted to the regulators for review and comment. A final D2 SI/RA Report will be developed and submitted to the regulators for approval. The risk assessment included in this report will incorporate data collected in the Site Investigation.

04.01.01.19.03 Decision Documents

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<p><u>Prepare Removal Notification (RN).</u> A draft D0 RN will be developed and submitted for internal review, then issued to DOE for review and approval. Comments from DOE will be incorporated and a D1 RN will be submitted to the regulators for review and comment. A final D2 RN will be developed and submitted to the regulators for approval.</p> <p><u>Prepare Engineering Evaluation/Cost Analysis (EE/CA)</u> A draft D0 EE/CA will be developed and submitted for internal review, then issued to DOE for review and approval. Comments from DOE will be incorporated and a final draft D1 EECA will be submitted to the regulators for review and comment. A final D2 EE/CA will be developed and submitted to the regulators for approval.</p> <p><u>Facilitate Public Comment Period and Participation Process</u> A public comment period is schedule for the public to review and comment on the EE/CA; public comments will be incorporated into the AM.</p> <p><u>Prepare Action Memorandum</u> A draft D0 Action Memorandum will be developed and submitted for internal review, then issued to DOE for review and approval. Comments from DOE will be incorporated and a final draft D1 Action Memorandum will be submitted to the regulators for review and comment. A final D2 Action Memorandum will be developed and submitted to the regulators for approval.</p> <p>04.01.01.19.04 Sediment Controls Construction</p> <p><u>Procurement for Design:</u> A subcontract formation team will be organized and a Request for Proposal (RFP) developed. A subcontractor will be awarded, through competitive bid, a FFP subcontract to design sedimentation controls.</p> <p><u>Design:</u> A design package based on the scope described in the Action Memorandum and the results of the Site Investigation will be developed and submitted for internal review, then issued to DOE for review and approval. Comments from DOE will be incorporated and a final (Certified For Construction –CFC) will be developed and issued in the Removal Action Work Plan to DOE and the regulators for review and approval.</p> <p><u>Removal Action Work Plan (RAWP):</u> A draft D0 RAWP will be developed and submitted for internal review, then issued to DOE for review and approval. A site-specific health and safety plan, waste management plan, and a construction quality assurance plan will be included in the appendices of this document. Comments from DOE will be incorporated and a final draft D1 RAWP will be submitted to the regulators for review and comment. A final D2 RAWP will be developed and submitted to the regulators for approval.</p> <p><u>Procurement for Construction:</u> A subcontract formation team will be organized and a Request for Proposal (RFP) will be developed and issued to execute the scope described in the RAWP. A subcontractor will be awarded, through competitive bid, a FFP subcontract to construction sedimentation controls, develop a postconstruction report, and manage waste.</p> <p><u>Construction:</u> A subcontractor will construct sedimentation controls consistent with the RAWP. Following award, the subcontractor will prepare and provide pre-mobilization submittals, mobilize on-site, and pass a readiness review before starting fieldwork. Fieldwork will be performed in accordance with the subcontract and RAWP.</p> <p><u>Postconstruction Report:</u> Following completion of fieldwork, a draft D0 Postconstruction Report will be prepared and submitted for review and comment. Comments will be incorporated and a draft Postconstruction Report will be submitted to DOE for review and approval. A final D2 Postconstruction will be submitted.</p>		

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04.01.01.19.05 NSDD Excavation, Sections 3, 4 & 5 <u>Procurement for Design:</u> A subcontract formation team will be organized and a Request for Proposal (RFP) developed. A subcontractor will be awarded, through competitive bid, a FFP subcontract to design NSDD Sections 3, 4 and 5. <u>Design:</u> A design package based on the scope described in the Action Memorandum will be developed and submitted for internal review, then issued to DOE for review and approval. Comments from DOE will be incorporated and a final (Certified For Construction –CFC) will be developed and issued in the Removal Action Work Plan to DOE and the regulators for review and approval. <u>Removal Action Work Plan (RAWP):</u> A draft D0 RAWP will be developed and submitted for internal review, then issued to DOE for review and approval. Appendices of the RAWP will include a site-specific health and safety plan, waste management plan, and construction quality assurance plan. Comments from DOE will be incorporated and a final draft D1 RAWP will be submitted to the regulators for review and approval. A final D2 RAWP will be developed and submitted to the regulators for approval. <u>Procurement for Construction:</u> A subcontract formation team will be organized and a Request for Proposal (RFP) will be developed and issued to execute the scope described in the RAWP. A subcontractor will be awarded, through competitive bid, a FFP subcontract to construction sedimentation controls, develop a postconstruction report, and manage waste. <u>Construction:</u> Following award, the subcontractor will prepare and provide pre-mobilization submittals, mobilize on-site and pass a readiness review before starting fieldwork. Fieldwork will be performed in accordance with the subcontract and approved RAWP. <u>Postconstruction Report:</u> Following completion of removal action fieldwork, a draft D0 Postconstruction Report will be prepared and submitted for review and comment. Comments will be incorporated and a draft Removal Action Report will be submitted to DOE for review and approval.		
04.01.01.19.06 Outfall Ditch Excavation <u>Procurement for Design:</u> A subcontract formation team will be organized and a Request for Proposal (RFP) will be developed. A subcontract will be awarded for design services. <u>Design:</u> A design package based on the scope described in the Action Memorandum and the findings of the site investigation will be developed and submitted for internal review, then issued to DOE for review and approval. Comments from DOE will be incorporated and a final (Certified For Construction –CFC) will be developed and issued in the Removal Action Work Plan to DOE and the regulators for review and approval. <u>Removal Action Work Plan (RAWP):</u> A draft D0 RAWP will be developed and submitted for internal review, then issued to DOE for review and approval. Appendices from the selected subcontractor for the site-specific health and safety plan, construction quality assurance plan, and activity hazards analysis will be added as soon as they are available. Comments from DOE will be incorporated and a final draft D1 RAWP will be submitted to the regulators for review and approval. A final D2 RAWP will be developed and submitted to the regulators for approval. Note: This RAWP will address the Storm Water Piping identified as sources or conduits of PCB in the Site Action Memorandum. <u>Procurement for Construction:</u> A subcontract formation team will be organized and a Request for Proposal (RFP) will be developed and issued to execute the scope described in the RAWP. A subcontractor will be awarded, through competitive bid, a FFP subcontract to design sedimentation controls. <u>Construction:</u> Following award, the subcontractor will prepare and provide pre-mobilization submittals,		

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<p>mobilize on-site and pass a readiness review before starting fieldwork. Fieldwork will be performed in accordance with the subcontract and approved RAWP.</p> <p><u>Removal Action Report:</u> Following completion of construction field activities, a draft D0 Removal Action Report will be prepared and submitted for review and comment. Comments will be incorporated and a draft D1 Removal Action Report will be submitted to DOE and the regulatory agencies for review and approval. A final D2 Removal Action Report will be developed and submitted for approval. Since the outfall ditch removal activities will mark the end of field activities, this Removal Action Report will address Sediment Controls Construction and NSDD Excavation, as well as Outfall Ditch Excavation.</p> <p>04.01.01.19.07 DOE Prime</p> <p>Wastes will be generated during the RI/FS fieldwork and during the Remedial Action, including contaminated soils, sediments, liquids, Personal Protective Equipment and other associated materials. These wastes will be characterized and transported to an appropriate receiving facility for disposal. Once that is determined, the waste streams will be placed in the disposal facility utilizing established rates.</p> <p>It is the core value of Bechtel Jacobs Company that the safety and health of every worker and the public at large, and our environment, are the most important assets we are entrusted to protect. To accomplish this, an Integrated Safety Management System (ISMS), based on DOE's ISMS has been implemented that incorporates the five core functions and is based on the seven guiding principles. The objective of ISMS is to systematically integrate safety and environmental protection into the planning and execution of all work activities. The term safety encompasses Nuclear Safety, Industrial Safety, Industrial Hygiene, Occupational Health, Health Physics, and environmental issues. ISMS requirements flow-down to Bechtel Jacobs Company subcontractors. The Five Core Functions are: (1) Define the scope of work, (2) Analyze hazards, (3) Develop and implement hazard controls, (4) Perform work within controls, and (5) Provide feedback and continuous improvement. The Seven Guiding Principles are (1) Line Management Responsibility for Safety, (2) Clear Roles and Responsibilities, (3) Competence commensurate with responsibility, (4) Balanced Priorities, (5) Identification of Safety Standards and Requirements, (6) Hazard Control Tailored to Work Being Performed, and (7) Operations Authorization.</p> <p>In performing the analysis of alternatives against the CERCLA nine criteria, consideration is given to the principles of ISMS. Specifically, in the analysis of "implementability" and "short-term impact", a trade-off assessment is performed to balance the risk to workers compared to the overall benefit of the project. This assessment follows the five core functions of ISMS to assure that the scope of work and the specific steps to carry out the project have been defined in sufficient detail to analyze the associated hazards, the effectiveness of the controls, and the actual risks to the workers.</p> <p>Before a subproject begins, several activities must be completed that demonstrate that all involved in the project have completed rigorous health and safety reviews and that all potential hazards of doing the work have been identified. The routine activities in RA are conducted in accordance with standard operating procedures, activity hazard analyses, and Integrated Safety Management plans. Non-routine work will require a readiness assessment as necessary to ensure complete health, safety, and environmental reviews prior to work start. This assessment is conducted by people, experienced in similar kinds of work, with the right to examine all aspects of a project about to commence, and require that the project team provide documented evidence that any applicable requirements of the job have been met.</p>		
REQUIREMENTS/DRIVERS		
<p>Bechtel Jacobs Company LLC Contract DE-AC05-98OR22700, December 18, 1997 Integrated Safety Management System Description, BJC/OR-87, Revision 2 Paducah FFA effective February 13, 1998 SMP for PGDP, FY 2002 Annual Revision, November 2001 As applicable, indicate other regulatory-related requirements.</p>		

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<p> CERCLA: <u>Y</u>/N RCRA: <u>Y</u>/N DNFSB: Y/<u>N</u> DOE Orders: <u>Y</u>/N AEA: Y/<u>N</u> UMTRCA: Y/<u>N</u> State: <u>Y</u>/N Other: Y/<u>N</u> </p> <p> WASTE VOLUMES Please see attached waste performance metrics, as applicable. The waste quantities supporting the method of accomplishment and basis of estimate are consistent with data reported on the Waste Performance Metrics Form. </p> <p> PROJECT SCHEDULE Please see attached project summary schedule, project detail schedule, and Milestone Status Summary Report. Schedule Assumptions: </p> <p> EXECUTION YEAR BASELINE Please see attached Budgeted Cost of Work Scheduled Plan </p> <p> BASELINE BY YEAR Please see attached Baseline by Year Report. </p>		